CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH
WALTER M. DICKIE, M.D., Director

Weekly Bulletin

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Anaphylaxis a Peculiar Phenomenon; Many Victims of Hay Fever and Food Sensitivity can be Relieved

By W. H. KELLOGG, M.D., Chief, Bacteriological Laboratory, Department of Public Health, State of California.

(From Gorgas Memorial Institute, Washington, D. C.)

Anaphylaxis is a very peculiar and interesting phenomenon that follows the introduction of substances of protein nature directly into the blood of animals, instead of by way of the stomach, the normal way of receiving treatment.

The term protein applies to a large group of nitrogenous substances that make up a very important part of all living things. Examples of proteins found in our daily food supply are lean meat, brain, glands, egg albumen, the casein of milk, etc. Proteins are constituents also of vegetable foods, being particularly high in peas and beans.

The classical laboratory experiment demonstrating anaphylaxis is to inject a drop of white of egg or milk under the skin of a guinea pig. This, of course, results in no harm to the animal, which continues the daily round of guinea pig affairs no different from its fellows. If, after two weeks, however, this same guinea pig is given a second injection of the same material, a very surprising thing happens. In a few minutes to half an hour, the pig becomes restless, scratches at its nose, appears to have difficulty in breathing and frequently falls over dead. The milk or other protein, harmless to a normal animal, is fatal to one that has been sensitized by a previous injection.

Anaphylaxis occurs only as a laboratory experiment in the realms of animals lower than man, and even where the result of the experiment is uncertain, or varies in its manifestations, when other animals than guinea pigs are used. The symptoms are totally different, for example, in the dog and in the rabbit, while in the monkey, the animal most like man, symptoms of anaphylaxis can not be produced at all.

Man, himself, is subject to various kinds of illness, which are undoubtedly manifestations of hypersensitiveness, but which are not traceable in most instances to a previous sensitization.

Among the different kinds of hypersensitiveness that are soon in man are, oak and ivy poisoning, primrose poisoning, hay fever, some cases of asthma, the so-called serum sickness (characterized by fever and hives, frequently following the injections of a curative serum or antitoxin) and the cases of food idiosyncrasy. People who can't eat certain foods without a stomach upset, perhaps pain and a rash on the skin are "sensitive" to that particular food. How they become sensitized is not clear, but it seems likely that during a temporary intestinal disturbance due to infection, imperfectly digested food is permitted to pass into the blood stream, thus complying with the requirement first mentioned in regard to experimental anaphylaxis, that the protein must enter the blood directly and not by way of the stomach.

There are two facts that detract somewhat from this theory. One is that hypersensitiveness has a hereditary basis; it runs in families, and the other is,

that people can not be sensitized like guinea pigs. If this were not true, we would hesitate to give a child a dose of diphtheria antitoxin if he had already had on some previous occasion a dose of anti-tentanic serum, both being made by immunizing horses, and therefore containing the same protein. But there is no ground for such fear. The few deaths that are on record as having occurred following the administration of serum were not due to a previous dose of serum, nor to anaphylaxis, but in nearly every case to a peculiar physical defect known as status lymphaticus. Fortunately, there are only a few of these accidents on record, notwithstanding the millions of doses of serum given. Knowledge of the guinea pig experiment has caused many people to fear that children will be sensitized by giving them toxin-antitoxin (which contains a minute amount of horse serum) but this fear is also groundless. In the first place, the amount of serum in a dose is only about one five-thousandth of a drop, and in the second place, a child is not a guinea pig. Hundreds of thousands have now been immunized and no untoward results attributable to toxin-antitoxin properly given have been observed.

There is one aspect of anaphylaxis that finds an application in the treatment of hay fever and food idiosyncrasy, conditions that bear some resemblance to anaphylaxis. This is the fact that anaphylactic animals may be rendered temporarily insusceptible to a "shock" dose of the protein concerned by the cautious injection of very small and frequently repeated doses of that substance. Many hay fever cases and food sensitive persons can in this way be relieved of their hypersensitiveness if the offending protein is known, and persons with a known serum idiosyncrasy can be "desensitized" before its administration.

ACTIVITY SHOWN IN ORGANIZATION OF MOSQUITO ABATEMENT DISTRICTS

The organization of the largest mosquito abatement district in the state is almost completed. This district will include most of Alameda County. Its organization has been approved by the city councils of all of the municipalities to be included within the district. The cities of Oakland, Berkeley, Alameda, San Leandro, Hayward and Albany are integral parts of the proposed district. Under the tax levy, as provided under the Mosquito Abatement District Act, about fifty thousand dollars will be available annually for mosquito abatement work in the East Bay District. The petitions for the organization of the district are now being circulated and there is every reason to believe that the organization will be perfected within a short time.

There is a large amount of work to be done in mósquito abatement in the salt marshes along the eastern shores of San Francisco Bay. The winds blow the salt marsh mosquitoes from their brooding places to all of the cities in Alameda County. Their invasion constitutes a distinct menace to the health and comfort of East Bay residents. The Anopheles mosquito, which transmits malaria, is not found in this district, but the salt marsh mosquito, which is particularly voracious, abounds there in tremendous numbers.

Another mosquito abatement district is in process of formation in North Sacramento. The city council has approved of the organization of the district, and the petition required by law has been signed. Action now is dependent upon the Sacramento County Board of Supervisors. The proposed district will include the city of North Sacramento, and a large portion of unincorporated territory of Sacramento County.

Definite plans are under way for the organization of districts in Orange County and Venice. There is considerable interest in the formation of districts in Solano County and in San Diego.

FORTY-SIX APPLICANTS TAKE PUBLIC HEALTH NURSING EXAMINATION

Forty-six nurses took the California State Board of Public Health examination for certificate as public health nurse, held in San Francisco and Los Angeles, May 11, 1929. This examination was held in accordance with the provisions of the law which authorizes the State Board of Public Health to prescribe qualifications of applicants for examination. The requirements are that the applicant shall be a registered nurse under the laws of California, and shall have completed a public health nursing course of eight months in a school approved by the board, or shall present evidence of having engaged in public health nursing for at least two years in connection with a public health organization approved by the board. In addition to the two years of practical experience, the applicant shall be required to present evidence showing that she has attended a summer course of at least six weeks at the University of California at Berkeley or Los Angeles, or a course of equal standard at any recognized university, or she may present evidence that she has had a four-months course in public health nursing, the outline of which has been approved by the board; attendance upon such a course is accepted in lieu of the six-weeks course in public health nursing at a university.

Medicine is as old as the human race, as old as the necessity for the removal of diseases.—*Heinrich Haeser.*

HEALTH PROGRAM FOR NATIONAL SOCIAL WORK CONFERENCE

The program for the National Conference of Social Work to be held in San Francisco June 26 to July 3 has been announced. The program for the Health Division is of special interest. The Health Division meets each day of the conference at 9 a.m. The subjects to be discussed are the venereal diseases; the economic aspect of medical care; the tuberculous migrator; the health of the preschool child; and publicity as a motive factor in health promotion.

Dr. Ray Lyman Wilbur, Secretary of the Interior, Washington, will preside over the Health Division meeting on Friday, June 28.

Other divisions which will present programs that are closely related to public health are industrial and economic problems, mental hygiene, neighborhood and community life, professional standards and education, and the family. The following is the program for the Health Division of the conference:

HEALTH

Howard W. Green, Secretary, Cleveland Health Council, Chairman.

Section Meeting I—Thursday, June 27th, 9.00 a.m.–10.45 a.m.

(Joint session with American Social Hygiene Association.)

Syphilis and Gonorrhea—The Biggest Single Problem in the Health, Welfare and Community Program.

1. The Extent.

   Dr. Thomas Parran, Jr., Assistant Surgeon General, United States Public Health Service, Washington.

2. The Solution.

   Dr. William F. Snow, General Director, American Social Hygiene Association, New York City.

Section Meeting II—Friday, June 28th, 9.00 a.m.–10.45 a.m.

Ray Lyman Wilbur, Secretary of the Interior, Washington, Presiding.

The Economic Aspect of Medical Care.

1. The Health Angle. Speaker to be announced.
2. The Medical Practice Angle. Speaker to be announced.
3. Economy and Efficiency in Relief and Health Coordination.

   Dr. William P. Shepard, Assistant Secretary, Welfare Division, Metropolitan Life Insurance Company, San Francisco.

Section Meeting III—Monday, July 1st, 9.00 a.m.–10.45 a.m.

(Joint Session with Division IV—The Family.)

The Tuberculous Migrant—A family Problem.

1. The Magnitude of the Problem.

   Jessamine S. Whitney, Statistician, National Tuberculosis Association, New York.

2. The Way the Problem is Handled from a Case Work Angle.

   Dorothy E. Wysor, General Secretary, Los Angeles Travelers Aid Society, Los Angeles.

Section Meeting IV—Tuesday, July 2d, 9.00 a.m.–10.45 a.m.

The Health of the Preschool Child.

1. The Preschool Clinic.

   Ellen S. Stadtmuller, M.D., Director, Bureau of Child Hygiene, California State Department of Public Health.

2. The Nursery School.

   Mrs. Mary C. Jones, Research Associate, Institute of Child Welfare, University of California, Berkeley.

3. Parental Education as a Means of Improving the Health of the Preschool Child.

   Herbert R. Stolz, M.D., Director, Institute of Child Welfare, University of California, Berkeley.

Section Meeting V—Wednesday, July 3d, 9.00 a.m.–10.45 a.m.

(Joint Session with Division XII—Educational Publicity.)

Publicity as a Motive Factor in Health Promotion.

1. Emotional Drives and Their Result—Human Action.

   Speaker to be Announced.

2. Health Publicity Planned to Put Motives to Work.

   Virginia R. Wing, Director of Health Education, Cleveland Health Council.

For additional joint session see—

Division V—Industrial and Economic Problems—June 29th, 9.00 a.m.

LEPERS ARE SENT TO FEDERAL INSTITUTION

Six lepers were sent to the Federal Leprosarium at Carville, Louisiana, on May 15th. Four of these patients were from San Francisco, one from Los Angeles and one from Oakland. Since this government institution was opened in 1922, eighty-eight lepers have been sent there from California. Nearly all cases of this disease that are discovered within the state are in Mexicans and Orientals. All such patients who have not acquired residential status are deported. The Federal Leprosarium was established by an act of congress in 1917, following a campaign for the building of such an institution begun by the California State Board of Health in 1914. About 300 patients are cared for in the leprosarium. Patients are transferred from California in May and December of each year. Their removal to Carville relieves our counties of the onerous burdens associated with their care and treatment.

MORBIDITY*

Diphtheria.

51 cases of diphtheria have been reported, as follows: Alameda County 2, Berkeley 2, Oakland 4, Fresno County 1, Los Angeles County 1, Glendale 1, Inglewood 1, Los Angeles 14, Pasadena 1, San Gabriel 1, Santa Monica 2, Merced 1, Orange 1, Santa Ana 1, Riverside 2, Sacramento 3, San Diego 3, San Francisco 5, Palo Alto 2, San Jose 1, Sebastopol 1, California 1.**

*From reports received on June 3d and 4th, for week ending June 1st.

**Cases charged to "California" represent patients ill before entering the state or those who contracted their illness traveling about the state throughout the incubation period of the disease. These cases are not chargeable to any one locality.

Scarlet Fever.

296 cases of scarlet fever have been reported, as follows: Alameda County 2, Oakland 26, Butte County 2, Gridley 1, Contra Costa County 5, El Cerrito 1, Fresno County 20, Fresno 6, Parlier 1, Bishop 1, Kern County 10, Susanville 2, Los Angeles County 23, Alhambra 1, Beverly Hills 2, Glendale 4, Huntington Park 9, Long Beach 6, Los Angeles 53, Hawthorne 1, South Gate 5, Monterey Park 1, Maywood 2, Madera County 2, Yosemite 1, Merced 3, Monterey County 1, Salinas 2, Orange County 2, Orange 1, Placer County 1, Riverside 3, Sacramento County 2, Sacramento 9, San Diego County 2, National City 1, San Diego 13, San Francisco 31, San Joaquin County 2, Stockton 5, San Mateo County 1, Santa Clara County 10, San Jose 1, Sunnyvale 2, Watsonville 1, Healdsburg 3, Tehama County 1, Tulare County 5, Porterville 1, Visalia 2, Sonora 2, Yolo County 2.

Measles.

133 cases of measles have been reported, as follows: Berkeley 3, Oakland 7, San Leandro 4, Richmond 1, Fresno 3, Los Angeles County 7, Burbank 5, Glendale 3, Huntington Park 3, Inglewood 1, Long Beach 1, Los Angeles 33, Pasadena 2, South Gate 1, Huntington Beach 1, Placer County 25, Sacramento 12, San Diego 16, San Francisco 4, Santa Paula 1.

Smallpox.

28 cases of smallpox have been reported, as follows: Berkeley 1, Livermore 1, Butte County 5, Humboldt County 2, Kern County 1, Los Angeles County 9, Long Beach 1, Los Angeles 2, Sausalito 1, Sacramento 1, San Francisco 1, San Jose 1, Tulare County 2.

Typhoid Fever.

5 cases of typhoid fever have been reported, as follows: Oakland 1, Los Angeles 1, Riverside County 1, National City 1, San Mateo County 1.

Whooping Cough.

237 cases of whooping cough have been reported, as follows: Berkeley 8, Oakland 13, Piedmont 1, Antioch 2, Fresno 1, Kern County 1, Bakersfield 3, Kings County 3, Los Angeles County 43, Arcadia 1, Beverly Hills 2, Compton 2, Glendale 4, Huntington Park 2, Long Beach 4, Los Angeles 29, Monrovia 2, Pasadena 11, Whittier 1, South Gate 2, Madera County 1, Marin County 3, Ross 2, Merced County 2, Orange County 2, Huntington Beach 1, Santa Ana 1, Tustin 1, Riverside 5, Sacramento 5, San Diego County 15, National City 1, San Diego, 11, San Francisco 20, San Joaquin County 12, Stockton 8, San Mateo 1, Santa Clara County 2, Mountain View 2, Palo Alto 6, Yolo County 1.

Meningitis (Epidemic).

14 cases of epidemic meningitis have been reported, as follows: Oakland 1, Los Angeles 4, Los Banos 1, Monterey County 3, Salinas 1, San Francisco 2, San Joaquin County 1, California 1.**

Poliomyelitis.

3 cases of poliomyelitis have been reported, as follows: Alhambra 1, Los Angeles 2.

Coccidioidal Granuloma.

1 case of coccidioidal granuloma has been reported from Monrovia.

Undulant Fever.

3 cases of undulant fever have been reported, as follows: San Francisco 1, Sutter County 1, Tehama County 1.

COMMUNICABLE DISEASE REPORTS

Disease	1929				1928			
	Week ending			Reports for week ending June 1 received by June 4	Week ending			Reports for week ending June 2 received by June 5
	May 11	May 18	May 25		May 12	May 19	May 26	
Botulism	0	0	0	0	2	0	0	0
Chickenpox	713	615	497	406	529	652	592	475
Coccidioidal granuloma	0	1	2	1	0	0	0	0
Diphtheria	44	52	55	51	87	105	87	74
Dysentery (amoebic)	0	7	3	1	0	2	0	0
Dysentery (bacillary)	2	3	0	0	2	0	2	0
Encephalitis (epidemic)	0	0	2	0	0	3	0	0
Erysipelas	16	16	21	22	10	15	9	14
Food poisoning	0	1	0	0	1	0	4	0
German measles	36	38	31	32	335	343	261	243
Gonococcus infection	92	100	95	55	172	85	84	82
Hookworm	0	2	0	0	0	0	0	0
Influenza	30	57	34	16	36	43	55	29
Jaundice (epidemic)	0	0	0	0	0	0	0	1
Leprosy	1	1	0	0	0	0	1	0
Malaria	1	5	1	1	2	2	0	0
Measles	122	132	148	133	117	124	97	90
Meningitis (epidemic)	22	20	23	14	3	6	3	3
Mumps	587	695	638	398	355	314	329	230
Ophthalmia neonatorum	1	0	1	1	1	0	0	1
Paratyphoid fever	0	0	0	0	0	0	1	0
Pellagra	0	1	2	0	4	2	1	2
Pneumonia (lobar)	47	50	49	42	58	45	42	33
Poliomyelitis	3	5	3	3	8	4	2	6
Rabies (animal)	15	12	17	17	15	9	18	11
Rocky Mt. spotted fever	0	4	0	0	0	0	0	1
Scarlet fever	448	407	459	296	175	160	167	148
Smallpox	74	50	67	28	38	30	13	35
Syphilis	178	120	178	90	283	186	111	88
Tetanus	1	0	2	1	1	2	2	2
Trachoma	3	3	4	0	6	3	1	2
Tularemia	0	1	1	0	0	0	0	0
Tuberculosis	217	235	257	162	217	200	196	155
Typhoid fever	14	9	7	5	19	18	16	13
Undulant fever	2	0	0	3	0	0	0	0
Whooping cough	294	342	341	237	316	362	286	214
Totals	2963	2984	2938	2015	2792	2715	2380	1952

Most of the reportable diseases show reductions in prevalence.

Chickenpox, mumps, scarlet fever and whooping cough, which have been running high, showed measurable reductions.

There were but 25 cases of smallpox reported last week.

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